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9. The host cell of claim 1, wherein said host cell comprises a CHO or COS cell.

10. The host cell of claim 1, wherein said host cell comprises a CHO cell.

What Is Claimed Is:

- 1. A host cell comprising a vector which comprises:
- (a) a nucleotide sequence encoding the erythropoietin polypeptide consisting of the amino acid sequence in SEQ ID NO:1;
 - (b) a viral promoter; and
 - (c) a viral terminator.
 - 2. The host cell deposited as DSM ACC2397.
- 3. The host cell of claim 1, wherein said viral promoter and viral terminator comprises an early promoter and terminator of a SV40 virus.
 - 4. The host cell of claim 1, wherein said vector comprises pVex 1.
 - 5. The host cell of claim 1, further comprising a pDHFR vector.
- 6. The host cell of claim 4, wherein said host cell is resistant to neomycin-derived antibiotics and methotrexate.
- 7. The host cell of claim 1, wherein said host cell is a mammalian cell.
- 8. The host cell of claim 7, wherein said mammalian cell is selected from the group comprising: CHO, COS, BHK, Namalwa, HeLa, Hep3B, Hep-G2 or other mammalian cells.

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- 11. A method for producing an EPO polypeptide, comprising culturing the host cell of claim 1 under conditions such that said polypeptide is expressed and recovered.
- 12. The method of claim 11, wherein such conditions comprise exposure to methotrexate.
- 13. The method of claim 9, wherein said culture produces more than 50 mg of EPO per liter of culture medium per day.
- 14. The host cell of claim 1, wherein said nucleotide sequence is obtained from human white blood cells.